

## Certificate of Analysis

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**Product Name:** Azurin p28 peptide

**Catalog No.:** 7662

**Batch No.:** 1

CAS Number: 897026-25-4

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>122</sub>H<sub>197</sub>N<sub>31</sub>O<sub>47</sub>S<sub>2</sub>  
**Batch Molecular Weight:** 2914.2  
**Physical Appearance:** White lyophilised solid  
**Counter Ion:** TFA  
**Solubility:** Soluble to 2 mg/ml in 0.01M PBS  
**Storage:** Store at -20°C  
**Peptide Sequence:** Leu-Ser-Thr-Ala-Ala-Asp-Met-Gln-Gly-Val-Val-Thr-Asp-Gly-Met-Ala-Ser-Gly-Leu-Asp-Lys-Asp-Tyr-Leu-Lys-Pro-Asp-Asp

### 2. ANALYTICAL DATA

**HPLC:** Shows 97.6% purity  
**Mass Spectrum:** Consistent with structure

### 3. AMINO ACID ANALYSIS DATA

Amino Acid Theoretical		Actual		Amino Acid Theoretical		Actual	
Ala	3.00	2.85	Lys	2.00	2.01		
Arg			Met	2.00	2.03		
Asx	6.00	6.04	Phe				
Cys			Pro	1.00	1.03		
Glx	1.00	1.01	Ser	2.00	1.92		
Gly	3.00	3.01	Thr	2.00	1.97		
His			Trp				
Ile			Tyr	1.00	1.04		
Leu	3.00	2.95	Val	2.00	1.18		

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**1**

CAS Number: 897026-25-4

**Description:**

Azurin p28 peptide is a 28 amino acid fragment of azurin (amino acids 50-77). The peptide is preferentially taken up by human breast cancer cell lines via caveolin-mediated endocytosis. Azurin p28 peptide binds wild-type and mutant p53 protein and inhibits E3 ligase COP1-mediated ubiquitination of p53 by >80%, resulting in decreased proteasomal degradation of p53. It induces cell cycle arrest in the G<sub>2</sub>/M phase leading to apoptosis. Azurin p28 peptide exhibits antiproliferative effects in human breast cancer cells in vitro and in vivo.

**Physical and Chemical Properties:**

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Batch Molecular Weight: 2914.2

Physical Appearance: White lyophilised solid

**Peptide Sequence:**

Leu-Ser-Thr-Ala-Ala-Asp-Met-Gln-Gly-Val-Val-Thr-Asp-Gly-Met-Ala-Ser-Gly-Leu-Asp-Lys-Asp-Tyr-Leu-Lys-Pro-Asp-Asp

**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble to 2 mg/ml in 0.01M PBS

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Counter Ion:** TFA

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gln, and N-terminal Glu.

Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.

Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 µm filter to remove potential bacterial contamination whenever possible.

**References:**

**Yaghoubi et al** (2020) p28 bacterial peptide, as an anticancer agent. *Front.Oncol.* **10** 1303. PMID: 32850408.

**Yamada et al** (2013) p28, a first in class peptide inhibitor of cop1 binding to p53. *Br.J.Cancer* **108** 2495. PMID: 23736031.

**Yamada et al** (2009) A peptide fragment of azurin induces a p53-mediated cell cycle arrest in human breast cancer cells. *Mol.Cancer Ther.* **8** 2947. PMID: 19808975.

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